

**REMARKS****I. Status of the Application**

Claims 1-31 and 65-98 are pending. Claims 19, 28, 68, 76, 79, 83, and 90-94 are amended. Claim 29 is cancelled without prejudice. Claims 96-98 are new. Claims 16-18 and 84 have been allowed. Claims 4, 5, 8, 10, 12-15, 70-78, 80-82, 86-88, and 95 are objected to.

**II. Claim Rejections – 35 U.S.C. § 112****A. The Term “Member”**

Claims 19-31, 66, 67, 70-74, 78-83, 86-89, and 95 have been rejected under 35 U.S.C. § 112, second paragraph, for allegedly being indefinite. The Examiner asserted that the word “member” is used as a “means” clause without reciting a function. That is incorrect. No function is recited in these claims because there was no intent to invoke means-plus-function claim interpretation.

The term “member” is a commonly used structural term in claims, which refers to a structural unit. This is consistent with dictionary definitions. For example, the McGraw-Hill Dictionary of Scientific and Technical Terms defines “member” as: “A structural unit such as wall, column, beam, or tie, or a combination of these.” (McGraw-Hill, Sixth Edition, 2002, p. 1308, a copy of which is enclosed). An applicable definition of “member” in the American Heritage® Dictionary of the English Language, Fourth Edition is: “A structural unit, such as a beam or wall.” (Houghton Mifflin Company, 2000, available at [www.bartleby.com](http://www.bartleby.com), for example, a copy of which is enclosed).

In addition, the claims include further structural limitations related to the member. For example, independent claim 19 recites that the “member” has “a first end connected to the body portion and a second end distanced from the body portion.”

In CCS Fitness Inc. v. Brunswick Corporation, 288 F.3d 1359, 1367, 62 U.S.P.Q.2d 1658 (Fed. Cir. 2002) (a copy of which is also enclosed), the Federal Circuit overturned a district Court’s finding that the term “reciprocating member” should be interpreted as a means-plus-function limitation, in light of the definitions of “member” in the McGraw-Hill Dictionary of Scientific and Technical Terms and the American Heritage<sup>®</sup> Dictionary definitions discussed above. In addition, the claims further defined the structure of the member (288 F.3d at 1369, 1370), as in the present application.

In order for a claim limitation to invoke 35 U.S.C. § 112, sixth paragraph, “(A) the limitation must use the phrase ‘means for’ or ‘step for’; (B) the ‘means for’ or ‘step for’ must be modified by functional language; and (C) the phrase ‘means for’ or ‘step for’ must not be modified by sufficient structure, material or acts for achieving the specified function.” MPEP § 2181, I. These requirements are not met here. In addition, the absence of the word “means” carries the presumption that the limitations were not in “means-plus-function form. . . . Id.

The use of the term “member” in the claims is sufficiently definite to meet 35 USC § 112, second paragraph and need not be part of a means-plus-function limitation.

Withdrawal of the rejections and reconsideration of the claims are respectfully requested.

#### **B. Claims 76 and 90-94**

Claims 76 and 90-94 have been rejected for lack of antecedent basis. The claims have been amended to address the rejections.

Withdrawal of the rejections and reconsideration of the claims are respectfully requested.

### III. Claim Rejections - § 102

#### A. U.S. Patent No. 6,366,086 (“Sen”)

Claims 1-3, 6, 7, 9, 11, 65, and 85 have been rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent No. 6,366,086 (“Sen”).

Independent claim 1 defines a test fixture comprising, in part, a first coil wound about a longitudinal axis along a first direction, “a longitudinal member connected to the body portion,” and a second coil wound around a longitudinal axis along a direction transverse to the first direction. Claim 1 further requires “a container to contain a test substance, the container being supported by the longitudinal member adjacent to the second coil.

Sen does not show a container to support a test substance, as claimed. Sen shows a mud channel 32, through which mud flows. The channel is not a container, the mud channel 32 is not supported by a longitudinal member, and mud is not a test substance in Sen.

An applicable definition of “container” is: “A receptacle, such as a carton, can or jar, in which material is held or carried.” (American Heritage® Dictionary of the English Language, Fourth Edition, Houghton Mifflin, Stiffilin Company, 2000, available at [www.bartleby.com](http://www.bartleby.com), for example, a copy of which is enclosed). In one example disclosed in the application, the container is a vial. (Page 15, lines 9-12). An applicable definition of “vial” is: “a small closed or closable vessel, esp. for liquids.” (Merriam-Webster’s Collegiate Dictionary, Tenth Edition, Merriam-Webster Inc., Springfield, Massachusetts, 2001, p. 1311).

Since fluid flows through the mud channel 32 in Sen, it is not a “receptacle” that holds anything. It is not, therefore, a “container,” as claimed.

In addition, no longitudinal member which supports a container, as claimed, is shown or described in Sen.

The Examiner asserts that the channel 32 carries “the borehole fluid to be examined.” It is respectfully submitted that this is incorrect. Sen examines the formations surrounding the borehole and ignores the fluid. In the Field of the Invention, for example, Sen states that the invention relates to obtaining “information about properties of formations surrounding the earth borehole. (Col. 1, lines 15-20). (Emphasis added). In the Summary of the Invention, Sen states: “In accordance with embodiments of the apparatus of the invention, equipment is provided for determining a nuclear resonance characteristic of formations surrounding an earth borehole. A magnetic field generating means in the logging device is provided for generating a magnetic field in the formations. A magnetic field detecting means is provided for detecting magnetic resonance signals from the formations. . . .” (Col. 3 lines 50-60, for example). (Emphasis added). Sen explains that in the prior art the bore fluid is doped to suppress signals from the fluid. (Col. 2, lines 25–27). In Sen, in contrast, the magnitude of the magnetic field generated in the borehole is said to be small, so it is not necessary to dope the bore fluid. (Col. 6, lines 28-39, for example). In either case, it is not desired to obtain nuclear resonance signals from the bore fluid. The bore fluid cannot, therefore, be a test substance as claimed.

Since the channel bore in Sen is not a container, no longitudinal member supporting a container is shown or described, and the mud is not a test substance, claim 1 and the claims dependent upon it are not anticipated.

Withdrawal of the rejection and reconsideration of the claims are respectfully requested.

**B. U.S. Patent No. 5,432,499A (“Ferut”)**

Claims 19-31, 66, 67, and 89 have been rejected under 35 U.S.C. § 102(b) as allegedly, being anticipated by U.S. Patent No. 5,432,499A (“Ferut”).

### 1. Independent Claim 19

Independent claim 19 defines a test fixture comprising, in part, a body portion having a longitudinal axis and first and second ends along the longitudinal axis. Claim 19 has been amended to require that at least one of the first and second ends is adapted to be “mechanically” connected to an MRI system. In Fig. 3, for example, one end of the test fixture has openings 136 for receiving bolts to connect the test fixture to one pole of the MRI system.

In Ferut, in contrast, the test fixture 50 sits on a table cradle 18 within the interior volume 14 of the MRI system 10, as shown in Fig. 4 and described in column 4, lines 48-52. The mounting plate 54, which the Examiner considers to be a body portion, is clamped to the table cradle 18. (Id.) No adaptations to mechanically connect the body portion to the table are shown or described.

In addition, the mounting plate 54 in Ferut does not have first and second ends along a longitudinal axis, at least one of which is adapted to be mechanically connected to the MRI system, as claimed. The Examiner asserts that the first and second ends are the top and bottom of the fixture 50. However, the top and bottom of the fixture are not “along” a longitudinal axis of the fixture. The axis 51 identified by the Examiner is not a longitudinal axis of the fixture 50. The ordinary meaning of “longitudinal” is “1: placed or running lengthwise 2: of or relating to length or the lengthwise direction.” (Merriam Webster’s Collegiate Dictionary, Tenth Edition, Merriam-Webster, Incorporated, Springfield, Massachusetts, 2001, p. 685, a copy of which is enclosed). The longitudinal axis of the fixture 50 in Ferut is perpendicular to the axis 51 in Fig. 1, along its length. No end of the Ferut fixture, along its length, is adapted to be mechanically connected to the MRI system, as claimed.

Claim 19 and the claims dependent upon it are not, therefore, anticipated by Ferut.

Withdrawal of the rejection and reconsideration of the claims are respectfully requested.

## **2. Independent Claim 28**

Claim 28 defines a test fixture comprising a body portion supporting a coil. The body portion comprises first and second members. Claim 28 has been amended to recite that the body portion is “longitudinal” and has “a longitudinal axis.” The first and second members are also longitudinal. The second member defines an opening for slidably receiving at least a portion of the first member. The first and second members may be moved with respect to each other to adjust the length of the body portion.

In Ferut: “The test coil 52 can be positioned in any one of the apertures 56 . . . . Alternatively, a spacer module 58 can be placed on top of a first test coil 52a and a second test coil 52b is then placed on top of the spacer module as shown in Fig. 4.” (Col. 4, line 63 – Col. 5, line 1). The locator disk 60 is therefore positioned within the aperture 56 and the base 88 is connected to the locator disk. A spacer 58a, which is similar to element 85, may also be placed within the aperture 56 (Col. 5, lines 2-5), and a test coil and other spacer modules placed above it. The locator disk and housing 85, or spacer 56, is locked into place within the aperture 56.

There is no longitudinal body portion having a longitudinal axis in Ferut. Nor are there longitudinal members, one defining an opening to slidably receive the other, enabling adjustment of the length of the body portion along the longitudinal axis, as claimed.

Claim 28 and the claims dependent upon it are not, therefore, anticipated by Ferut.

Withdrawal of the rejection and reconsideration of the claims are respectfully requested.

## **C. Claims 79 and 83**

Claims 79 and 83 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,432,449 A (“Jacobson”).

Claim 79 defines a test fixture comprising, in part, “a base comprising first and second telescoping members.” Claim 79 has been amended to require that “the first coil is directly supported by the first member.”

In Jacobson, in contrast, no coil is “directly” supported by the telescoping shafts 55, 57. The coils 13 are supported directly by a mounting frame 17. The frame 17 is pivotally connected to a pivoting first support 31, which is pivotally connected to a pivoting second support 33 and balance support rod 37. The second support 33 and the balance support rod 37 are pivotally connected to a pivot block 59, which is connected to the telescoping shaft 57. The coils 13 are not, therefore, directly supported by either of the telescoping shafts 55, 57, as claimed.

Claims 79 and 83 are not, therefore, anticipated by Jacobson.

Withdrawal of the rejection and reconsideration of the claims are respectfully requested.

**D. Independent Claim 68**

Claims 68, 69, and 90-94, have been rejected under 35 U.S.C. § 102(c) allegedly being anticipated by U.S. Patent No. 6,492,815 B2 (“Hinks”).

Independent claim 68, which defines a test fixture, has been amended to require, in part, that the test fixture be “adapted to be mechanically connected to a magnetic resonance imaging system.”

In Hinks, in contrast, the supporting frame 27 is said to be “placed inside a bore of an MRI system.” (Col. 2, lines 19-23). No mechanical connection to the MRI system is shown or described.

Hinks does not, therefore, anticipate claim 68, and claims 69, and 90-94, which are dependent in claim 68.

Withdrawal of the rejection and reconsideration of the claims are respectfully requested.

#### IV. The New Claims

New claim 96, which is dependent on claim 1, further requires that “the container comprises a vial,” as discussed on page 15, lines 9-12 of the specification. A definition of “vial” is given above. Sen does not show a vial.

New claim 97, which is also dependent on claim 1, recites that the first and second coils “have different geometric centers,” as shown in Fig. 3 and Fig. 11, for example. As shown in Fig. 1 of Sen, the coils in Sen have the same geometric centers.

New claim 98, which is dependent on claim 28, recites that the coil is wound around the second member. Claim 28 requires that the second member receives the first member. Ferut does not show a coil wound around a second member that receives a first member, as claimed.

Entry and consideration of the new claims are respectfully requested.

#### V. Conclusion

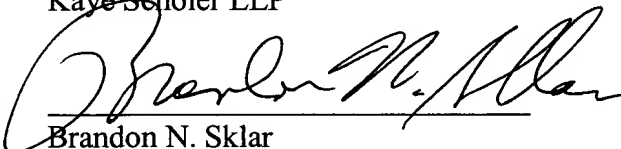
Allowance of the application in light of these Amendments and Remarks are respectfully requested.

Respectfully Submitted  
Kaye Scholer LLP

Dated: May 1, 2006

Kaye Scholer LLP  
425 Park Avenue  
New York, NY 10022

By:

  
Brandon N. Sklar  
Reg. No. 31,667



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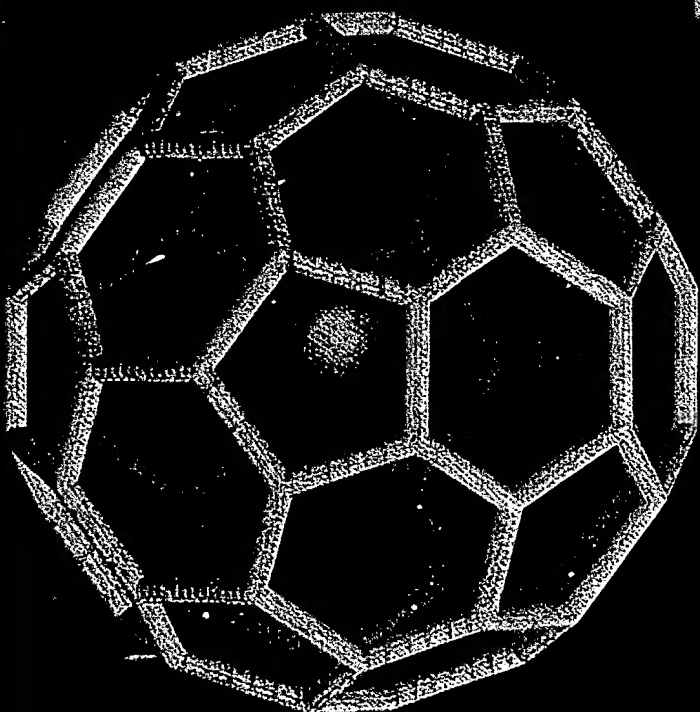
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Sixth Edition

On the cover: Representation of a fullerene molecule with a noble gas atom trapped inside. At the Permian-Triassic sedimentary boundary the noble gases helium and argon have been found trapped inside fullerenes. They exhibit isotope ratios quite similar to those found in meteorites, suggesting that a fireball meteorite or asteroid exploded when it hit the Earth, causing major changes in the environment. (Image copyright © Dr. Luann Becker. Reproduced with permission.)

Over the six editions of the Dictionary, material has been drawn from the following references: G. M. Garrity et al., *Taxonomic Outline of the Prokaryotes*, Release 2, Springer-Verlag, January 2002; D. W. Linzey, *Vertebrate Biology*, McGraw-Hill, 2001; J. A. Pechenik, *Biology of the Invertebrates*, 4th ed., McGraw-Hill, 2000; U.S. Air Force Glossary of Standardized Terms, AF Manual 11-1, vol. 1, 1972; F. Casey, ed., *Compilation of Terms in Information Sciences Technology*, Federal Council for Science and Technology, 1970; *Communications-Electronics Terminology*, AF Manual 11-1, vol. 3, 1970; P. W. Thrush, comp. and ed., *A Dictionary of Mining, Mineral, and Related Terms*, Bureau of Mines, 1968; *A DOD Glossary of Mapping, Charting and Geodetic Terms*, Department of Defense, 1967; J. M. Gilliland, *Solar-Terrestrial Physics: A Glossary of Terms and Abbreviations*, Royal Aircraft Establishment Technical Report 67158, 1967; W. H. Allen, ed., *Dictionary of Technical Terms for Aerospace Use*, National Aeronautics and Space Administration, 1965; *Glossary of Stinfo Terminology*, Office of Aerospace Research, U.S. Air Force, 1963; *Naval Dictionary of Electronic, Technical, and Imperative Terms*, Bureau of Naval Personnel, 1962; R. E. Huschke, *Glossary of Meteorology*, American Meteorological Society, 1959; *ADP Glossary*, Department of the Navy, NAVSO P-3097; *Glossary of Air Traffic Control Terms*, Federal Aviation Agency; *A Glossary of Range Terminology*, White Sands Missile Range, New Mexico, National Bureau of Standards, AD 467-424; *Nuclear Terms: A Glossary*, 2d ed., Atomic Energy Commission.

**McGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS,  
Sixth Edition**

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**melting profile** [BIOCHEM] A plot of the degree of denaturation of the strands in a nucleic acid duplex in a specified time as a function of temperature. { 'melt-ɪŋ, prɒ, fɪl }

**melting rate** [MET] In electric arc welding, the weight or length of electrode melted in a specified unit of time. Also known as burn-off rate; melt-off rate. { 'melt-ɪŋ, ræt }

**melting ratio** [MET] The ratio of metal weight to fuel weight in a melting process. { 'melt-ɪŋ, ræ, shō }

**melting temperature** [BIOCHEM] The temperature at which denaturing occurs for half of the double helices of deoxyribonucleic acid. { 'melt-ɪŋ, tem-prə, chər }

**melt instability** [MECH] Instability of the plastic melt flow through a die. { 'melt, ɪn-stə, bɪl-əd-ē }

**melt loading** [ORD] Process of melting solid explosive by heat and pouring into bombs, projectiles, and the like to solidify. Also known as cast loading. { 'melt, lɒd-ɪŋ }

**melt-off rate** See melting rate. { 'melt, ɒf, ræt }

**melton** [TEXT] A fabric with all-wool or cotton warp and woolen weft; the face is napped carefully to raise the nap straight up, showing the weave clearly. Also known as beaver cloth; kersey. { 'mel-tən }

**melt spinning** [TEXT] A process by which nylon, polyester, or glass is melted to allow it to be extruded into fibers through a spinneret. { 'melt, spin-ɪŋ }

**melt strength** [MECH] Strength of a molten plastic. { 'melt, streŋkθ }

**melt-through** [NUCLEO] An accident in a nuclear reactor in which melting of the fuel core (meltdown) leads to runaway melting of nuclear fuel out of the bottom of the reactor, down through the concrete mat below, and into the earth. Also known as China syndrome. { 'melt, θruː }

**meltwater** [HYD] Water derived from melting ice or snow, especially glacier ice. { 'melt, wɔd-ər }

**Melusinidae** [INV ZOO] A family of orthorhaphous dipteran insects in the series Nematocera. { 'mel-ə'sɪn-ə, dē }

**Melyridae** [INV ZOO] The soft-winged flower beetles, a large family of cosmopolitan coleopteran insects in the superfamily Cleroidea. { mə'lɪr-ə, dē }

**member** [CIV ENG] A structural unit such as a wall, column, beam, or tie, or a combination of any of these. [GEOL] A rock stratigraphic unit of subordinate rank comprising a specially developed part of a varied formation. [MATH] 1. An individual object that belongs to a set. Also known as element. 2. For an equation, the expression on either side of the equality sign. { 'mem-bər }

**membership function** [MATH] The characteristic function of a fuzzy set, which assigns to each element in a universal set a value between 0 and 1. { 'mem-bər, ʃɪp, fəŋk-ʃən }

**Membracidae** [INV ZOO] The treehoppers, a family of homopteran insects included in the series Auchenorrhyncha having a pronotum that extends backward over the abdomen, and a vertical upper portion of the head. { mem'bras-əd-ē }

**membrane** [BUILD] In built-up roofing, a weather-resistant (flexible or semiflexible) covering consisting of alternate layers of felt and bitumen, fabricated in a continuous covering, and surfaced with aggregate or asphaltic material. [CHEM, ENG] 1. The medium through which the fluid stream is passed for purposes of filtration. 2. The ion-exchange medium used in dialysis, diffusion, osmosis and reverse osmosis, and electrophoresis. [HISTOL] A thin layer of tissue surrounding a part of the body, separating adjacent cavities, lining cavities, or connecting adjacent structures. { 'mem-bræn }

**membrane analogy** [MECH] A formal identity between the differential equation and boundary conditions for a stress function for torsion of an elastic prismatic bar, and those for the deflection of a uniformly stretched membrane with the same boundary as the cross section of the bar, subjected to a uniform pressure. { 'mem-bræn ə, nəl-ə, jē }

**membrane bone** See dermal bone. { 'mem-bræn, bɒn }

**membrane carrier** [CELL MOL] Any protein that facilitates the movement of small molecules across cell membranes. { 'mem-bræn, kær-ər }

**membrane curing** See membrane waterproofing. { 'mem-bræn, kʏər-ɪŋ }

**membrane distillation** [CHEM, ENG] A separation method that uses a nonwetting, microporous membrane, with a liquid feed phase on one side and a condensing permeate phase on

the other. Also known as membrane evaporation; transmembrane distillation. { mə'bræn, dɪ'stɪl-ən }

**membrane evaporation** See membrane distillation. { mə'bræn, ɪ, vep-ə'ræ, ʃən }

**membrane keyboard** [COMPUT SCI] A keyboard with microcomputers and hand-held devices, consisting of two closely spaced membranes separated by a spacer with holes corresponding to the keys. { mə'bræn, kē, bɔrd }

**membrane mimetic chemistry** [ORD] Processes and reactions that have been designed to mimic information obtained from biological systems. { 'mem-bræn mɪ'med-ɪk, kem-ə'stre, jə }

**membrane potential** [PHYSIO] A potential difference across a living cell membrane. { 'mem-bræn, pɒ, tən, ʃəl }

**membrane separation** [CHEM, ENG] The separation of components (membranes) between miscible fluids for a suitable driving force across the membrane, such as concentration or pressure differential, to effect the transport of one or more feed components. { mə'bræn, sə, peɪ, ʃən }

**membrane stress** [MECH] Stress which is the average stress across the cross section involved in the reference plane. { 'mem-bræn, stres }

**membrane waterproofing** [CIV, ENG] The process of waterproofing, especially in pavements, by spraying a liquid material on a surface to form a solid, impervious layer which holds back water in the concrete. Also known as membrane waterproofing. { 'mem-bræn, wɔd-ər, pruf-ɪŋ }

**membranous glomerulonephritis** [MED] A type of glomerulonephritis characterized by thickening of the glomerular membrane due to deposition of electron-dense material. { 'mem-brə-nəs gla'mer-yə-lō-ne'frɪd-əs }

**membranous labyrinth** [ANAT] The membranous part of the inner ear of vertebrates. { 'mem-brə-nəs laɪ, bərɪnθ }

**membranous pregnancy** [MED] Gestation in which there has been a rupture of the amniotic sac and the fetus is in contact with the wall of the uterus. { 'mem-brə-nəs prɛ, gnəns }

**membranous urethra** [ANAT] The part of the urethra between the two facial layers of the urogenital diaphragm. { 'mem-brə-nəs jū're-thrə }

**MEMC** See methoxyethylmercury chloride.

**memex** [COMPUT SCI] A hypothetical machine described by Vannevar Bush, which would store written records so that they would be available almost instantly by merely pushing the right button for the information desired. { 'me, meks }

**memistor** [ELEC] Nonmagnetic memory device consisting of a resistive substrate in an electrolyte; when used in an active system, a direct-current signal removes copper from an anode and deposits it on the substrate, thus lowering the resistance of the substrate; reversal of the current reverses the process, raising the resistance of the substrate. { 'me, mɪs-tər }

**memomotion study** [IND, ENG] A technique of work measurement and methods analysis using a motion picture camera operated at less than normal camera speed. Also known as camera study; micromotion study. { 'mem-ə-moʊ, mə, stəd-ē }

**memory** [COMPUT SCI] Any apparatus in which data may be stored and from which the same data may be retrieved especially, the internal, high-speed, large-capacity working storage of a computer, as opposed to external devices. Also known as computer memory. [PSYCH] The recollection of past events or sensations, or the performance of previously learned skills without practice. { 'mem-rē }

**memory address register** [COMPUT SCI] A special register containing the address of a word currently required. { 'mem-rē, ˈad, res, ˈrej-ə, stər }

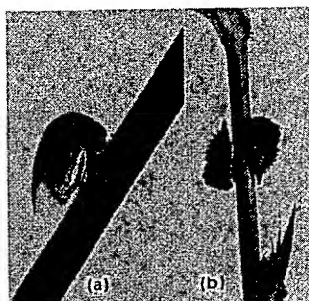
**memory bank** [COMPUT SCI] A physical section of a computer memory, which may be designed to handle information transfers independently of other such transfers in other sections. { 'mem-rē, bæŋk }

**memory buffer register** [COMPUT SCI] A special register in which a word is stored as it is read from memory or just prior to being written into memory. { 'mem-rē, bʌf-ər, ˈrej-ə, stər }

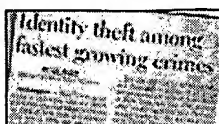
**memory capacity** See storage capacity. { 'mem-rē, kə, pəs-əd-ē }

**memory card** [COMPUT SCI] A small card, typically used

## MEMBRACIDAE



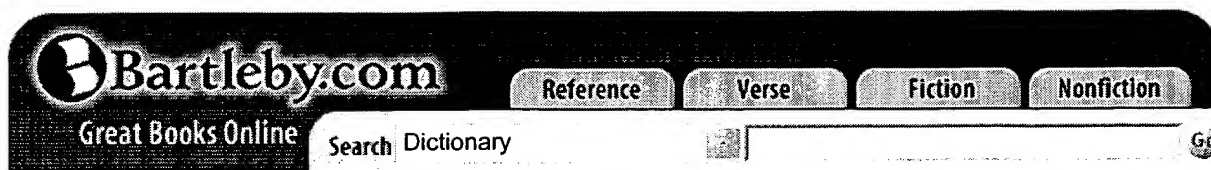
Membracids on stems. (a) Adult. (b) Nymphs. (Courtesy of C. H. Hanson)



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The American Heritage® Dictionary of the English Language: Fourth Edition. 2000.

## member

SYLLABICATION: mem·ber

PRONUNCIATION: mēm'ber

NOUN: **1.** A distinct part of a whole, especially: **a.** *Linguistics* A syntactic unit of a sentence; a clause. **b.** *Logic* A proposition of a syllogism. **c.** *Mathematics* An element in a set. **2.** A part or an organ of a human or animal body, as: **a.** A limb, such as an arm or a leg. **b.** The penis. **3.** A part of a plant. **4.** One that belongs to a group or an organization: *a club member; a bank that is a member of the FDIC.* **5.** *Mathematics* The expression on either side of an equality sign. **6.** A structural unit, such as a beam or wall.

ETYMOLOGY: Middle English *membre*, from Old French, from Latin *membrum*.

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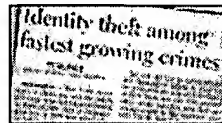
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## container

SYLLABICATION: con·tain·er

PRONUNCIATION: kən-tā'nər

NOUN: 1. A receptacle, such as a carton, can, or jar, in which material is held or carried. 2. A large reusable receptacle that can accommodate smaller cartons or cases in a single shipment, designed for efficient handling of cargo.

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Abbr



embling a garment  
signia worn by ec-  
their rank and ap-  
al (vest(t)-men-t'l)

a pocket (a ~ edi-

lif. of MF *vestiarie*.  
room for the cler-  
urch meetings and  
ish b: an elective  
or and a group of  
irs of the parish  
try  
o clothe — more at  
e or vestment) b  
a garment  
over with vesture

atch used esp. for-

g to, or resembling  
irsts (has a ~ tem-

erinary care for (an  
et (a person or ani-  
subject to expert ap-

cia; perh. akin to L  
baceous twining le-  
and green manure  
inous herbs (genus

teranus, adj., old.  
ETHER] (1509) 1 a  
r of the armed force  
tion or skill (as pol-

commemoration of  
ed as a legal holiday  
es  
tatement given quali-  
al or state law; specif  
on a civil service ex-

'n- (1646) a per-  
medicine  
dj [L *vetinariarius* of  
fem. pl. of *vetinari-*  
0): of, relating to, or  
alleviation of disease

IAN  
[ca. 1858): an East  
arm regions esp. for  
wads (as mats) and in

: to forbid] (1629) 1  
a: a power of one de-  
or prohibit finally or  
ed by another depart-  
prevent permanently  
by a legislature b (1)  
: communicating the  
the U.S. for vetoing a

mit or approve: PRO-  
o as to prevent enac-  
tment) n  
tentia votes to be en-  
ly (a ~ bill)  
vexer. fr. *L. vexare* to  
— more at WAY] (15c)  
restaurant is ~ed by  
headache ~ed HARRAS  
ovocations: HARRAS  
a problem to ~ the  
ANNoy

f harassing or vexat-  
exed: IRRITATION

tion: DISTRESSING  
TROUBLED — VEX-

at length (a ~ que-

vevation  
59): the study of the  
o-log-i-cal ~ (13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100)

L velum curtain

oman cavalry ~

at way] (1779) 1

bo: by means of

vita — more at

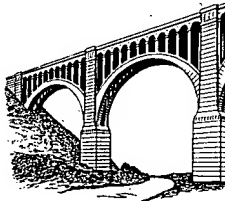
f surviving outside

normal human

capable of grow-

developing (~ seeds) (~ eggs) 3 a: capable of working, function-  
ing, or developing adequately (~ alternatives) b: capable of exist-  
ence and development as an independent unit (the colony is now a ~  
state) c (1): having a reasonable chance of succeeding (a ~ candi-  
date) (2): financially sustainable (a ~ enterprise) — *vi-a-bil-i-ty*

*vi-a-bil-i-ty* n — *vi-a-bly* /vi-ə-blē/ adv  
*via-duct* /vi-ə-dəkt/ n [L *via* way, road  
+ E *aqueduct*] (1816): a long elevated  
roadway usu. consisting of a series of  
short spans supported on arches, piers,  
or columns



viaduct

*vi-al* /vi-(ə)-əl/ n [ME *firole*, *virole*, fr. MF  
*firole*, fr. OPov *fiola*, fr. L *phiala* —  
more at PHIAL] (14c): a small closed or  
closable vessel esp. for liquids

*via me-dia* /vi-ə-mē-dē-ə; vē-ə-mā-dē-  
ə; -mē-ə/ n [L] (1834): a middle way

*vi-and* /vi-ənd/ n [ME, fr. MF *viande*,  
fr. ML *vivanda* food, alter. of L *vivenda*,  
neut. pl. of *vivendus*, gerundive of *vivere*  
to live — more at QUICK] (15c) 1: an  
item of food; esp.: a choice or tasty dish  
2 pl.: PROVISIONS, FOOD

*vi-at-i-cum* /vi-ə-ti-kəm, vē-ə- / n, pl *-cums* or *-ca* /-kə/ [L — more at  
VOYAGE] (1562) 1: the Christian Eucharist given to a person in dan-  
ger of death 2 a: an allowance (as of transportation or supplies and  
money) for traveling expenses b: provisions for a journey

*vibe* /vib/ n (1967): VIBRATION 4 (seems to be in on every conversa-  
tion, every deal, every ~ that is winging through the room — Albert  
Goldman) — usu. used in pl. (got bad ~s from him)

*vibes* /vibz/ n pl (1940): VIBROPHONE — *vib-ist* /vi-bist/ n

*vi-bra-harp* /vi-brə-ˈhɑrp/ n [fr. *Vibra-Harp*, a trademark] (1930): VI-

BRAPHONE — *vi-bra-harp-ist* /vi-brə-ˈhɑrp-ist/ n

*vi-brance* /vi-brɑns/ n (1921): VIBRANCY

*vi-bran-cy* /vi-brɑn(t)-sē/ n (ca. 1890): the quality or state of being vi-

brant.  
*vi-brant* /vi-brɑnt/ adj (1616) 1 a (1): oscillating or pulsating rapidly  
(2): pulsating with life, vigor, or activity (a ~ personality) b (1)  
: readily set in vibration (2): RESPONSIVE, SENSITIVE 2: sounding as  
a result of vibration: RESONANT (a ~ voice) 3: BRIGHT 4 (a ~ or-  
ange) — *vi-brant-ly* adv

*vi-bra-phon* /vi-brə-fōn/ n [L *vibrare* + ISV *-phone*] (1926): a percus-  
sion instrument resembling the xylophone but having metal bars and  
motor-driven resonators for sustaining the tone and producing a vibra-  
tion — *vi-bra-phon-ist* /vi-brə-fōn-ist/ n

*vibrate* /vi-brāt, esp Brit vi-ə/ vb *vi-brat-ed*; *vi-brat-ing* [L *vibratus*,  
pp. of *vibrare* to brandish, wave, rock — more at WIPE] vt (1616) 1: to  
swing or move to and fro 2: to emit with or as if with a vibratory mo-  
tion 3: to mark or measure by oscillation (a pendulum vibrating sec-  
onds) 4: to set in vibration ~ vi 1 a: to move to and fro or from  
side to side: OSCILLATE b: FLUCTUATE, VACILLATE (~ between two  
choices) 2: to have an effect as or as if of vibration (music, when soft  
voices die, ~s in the memory — P. B. Shelley) 3: to be in a state of vi-  
bration: QUIVER 4: to respond sympathetically: THRILL (~ to the  
opportunity) — *syn* see SWING

*vi-bra-tile* /vi-brā-tīl, -tīl/ adj (ca. 1826) 1: characterized by vibration  
(2): adapted to or used in vibratory motion (the ~ organs of insects)

*vi-bra-tion* /vi-brā-shən/ n (1655) 1 a: a periodic motion of the par-  
ticles of an elastic body or medium in alternately opposite directions  
from the position of equilibrium when that equilibrium has been dis-  
turbed (as when a stretched cord produces musical tones or molecules  
in the air transmit sounds to the ear) b: the action of vibrating: the  
state of being vibrated or in vibratory motion: as (1): OSCILLATION  
(2): a quivering or trembling motion: QUIVER 2: an instance of vi-  
bration 3: vacillation in opinion or action: WAVERING 4 a: a char-  
acteristic emanation, aura, or spirit that infuses or vitalizes someone or  
something and that can be instinctively sensed or experienced — often  
used in pl. b: a distinctive use, emotional atmosphere capable of be-  
ing sensed — usu. used in pl. — *vi-bra-tion-al* /-shənəl, -shən-əl/ adj —  
*vi-bra-tion-less* /-shən-ləs/ adj

*vi-bra-tor* /vi-brā-tōr, -tōr/ n, pl *-tos* [It. fr. pp. of *vibrare* to vibrate, fr.  
L *vibrare*] (1876): a slightly tremulous effect imparted to vocal or instru-  
mental tone for added warmth and expressiveness by slight and rapid  
variations in pitch — *vi-bra-tor-less* /-ləs/ adj

*vi-bra-tory* /vi-brā-tōr-ē, -tōr-ē/ adj (1728) 1: consisting of, capable  
of, or causing vibration or oscillation 2: characterized by vibration  
*vi-bri-ant* /vi-brē-ānt, -ri-ant/ n, pl *-rios* [NL *Vibrio*, fr. L *vibrare* to wave]  
(ca. 1864): any of a genus (*Vibrio*) of short rigid motile bacteria typi-  
cally shaped like a comma or an S — *vi-bri-on-ic* /vi-brē-ā-nik/ adj —  
*vi-bri-on* /vi-brē-ān, -ri-ān/ n [NL *Vibrio*; *Vibrio*] (1882): *VIBRIO*; also: a  
motile bacterium

*vi-bri-osis* /vi-brē-ō-sis/ n, pl *-oses* /-sēz/ [NL, fr. *Vibrio*] (1950)  
1: abortion in sheep and cattle caused by a bacterium (*Campylobacter*  
and *syn: Vibrio fetus*) that invades the uterine and placental capillaries,  
interferes with fetal nutrition, and causes the death of the developing  
fetus 2: a vibrating device (as in an electric bell or buzzer)

*vi-bri-ry* /vi-brē-ri, -ri-ri/ n, pl *-rios* [NL *Vibrio*, fr. L *vibrare* to wave]  
(ca. 1864): any of a genus (*Vibrio*) of short rigid motile bacteria typi-  
cally shaped like a comma or an S — *vi-bri-on-ic* /vi-brē-ā-nik/ adj —  
*vi-bri-on* /vi-brē-ān, -ri-ān/ n [NL *Vibrio*; *Vibrio*] (1882): *VIBRIO*; also: a  
motile bacterium

*vi-bri-um* /vi-brē-ū-m/ n [NL, fr. L, a viburnum] (ca. 1731): any of a  
genus (*Viburnum*) of widely distributed shrubs or trees of the honey-  
suckle family with simple leaves and white or rarely pink cymose flow-  
ers

*vi-bri-um* /vi-brē-ū-m/ n [NL, fr. L, a viburnum] (ca. 1731): any of a  
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suckle family with simple leaves and white or rarely pink cymose flow-  
ers

of the clergy who exercises a broad pastoral responsibility as the repre-  
sentative of a prelate — *vic-ar-ship* /-ˈʃɪp/ n

*vic-ar-ship* /vi-k(ə)-ˈrɪj/ n (15c) 1: the benefice of a vicar 2: the house  
of a vicar 3: VICARIATE 1

*vic-ar-apostolic* /vi-k(ə)-ˈrɪj-ə-ˈstɒl-ɪk/ n (1766): a Roman Catholic titular  
bishop who administers a territory not organized as a diocese

*vic-ar-ate* /vi-k(ə)-ˈrɪj-ə-ˈtɛɪ/ n (1883): VICARIATE

*vic-ar-general* /vi-k(ə)-ˈrɪj-ə-ˈdʒen-ə-rəl/ n, pl *vicars-general* (15c): an administrative deputy of  
a Roman Catholic or Anglican bishop or of the head of a religious or-  
der

*vic-ar-i-al* /vi-ˈk(ə)-rē-əl, vɔ-, -ˈk(ə)-rē-əl/ adj [L *vicarius*] (1617) 1: VICARIOUS  
1 2: of or relating to a vicar

*vic-ar-i-ance* /vī-ə-n(t)s/ n (1957): fragmentation of the environment (as  
by splitting of a tectonic plate) in contrast to dispersal as a factor in  
promoting biological evolution by division of large populations into  
isolated subpopulations — called also *vicariance biogeography*

*vic-ar-i-ant* /vī-ə-nt/ adj [trans. of G *vikariend*, prp. of *vikarieren* to act  
as a substitute, fr. *Vikar* representative, proxy, fr. MHG *vicar*, fr. L *vi-*  
*caricus* substitute] (1952): of, relating to, or being the process of vicari-  
ation or organisms that evolved through this process (the possible ~  
origin of the Antillean arthropod fauna) — *vicariant* n

*vic-ar-i-ate* /vī-ə-ɪt/ n [ML *vicarius*, fr. L *vicarius* vicar] (1610) 1: the  
office, jurisdiction, or tenure of a vicar 2: the office or district of a  
governmental administrative deputy

*vic-ar-i-ous* /vi-ˈk(ə)-rē-əs, vɔ-, -ˈk(ə)-rē-əs/ adj [L *vicarius*, fr. *vicis* change, al-  
ternation, stead — more at WEEK] (1637) 1 a: serving instead of  
someone or something else b: that has been delegated (~ authority)  
2: performed or suffered by one person as a substitute for another or  
to the benefit or advantage of another: SUBSTITUTIONARY (a ~ sacri-  
fice) 3: experienced or realized through imaginative or sympathetic  
participation in the experience of another 4: occurring in an unex-  
pected or abnormal part of the body instead of the usual one (bleeding  
from the gums sometimes occurs in the absence of the normal dis-  
charge from the uterus in ~ menstruation) — *vi-car-i-ous-ly* adv —  
*vi-car-i-ous-ness* n

*Vicar of Christ* (1570): POPE 1

*vice* /vis/ n [ME, fr. OF, fr. L *vitium* fault, vice] (14c) 1 a: moral de-  
pravity or corruption: WICKEDNESS b: a moral fault or failing c: a  
habitual and usu. trivial defect or shortcoming: FOIBLE (suffered from  
the ~ of curiosity) 2: BLEMISH, DEFECT 3: a physical imperfec-  
tion, deformity, or taint 4 a *often cap*: a character representing one of  
the vices in an English morality play b: BUFFOON, JESTER 5: an ab-  
normal behavior pattern in a domestic animal detrimental to its health  
or usefulness 6: sexual immorality; esp.: PROSTITUTION — *syn* see  
FAULT, OFFENSE

*vice chiefly Brit var of VISE*

*vice* /vis also vī-sē/ prep [L, abl. of *vicis* change, alternation, stead —  
more at WEEK] (1770): in the place of (I will preside, ~ the absent  
chairman); also: rather than

*vice-* /vis, vīs/ prefix [ME *vice-*, *vice-*, fr. MF, fr. LL *vice-*, fr. L *vice*, abl.  
of *vicis*]: one that takes the place of (*vice-chancellor*)

*vice admiral* n [MF *visamiral*, fr. *vis-vice* + *amiral* admiral] (1520): a  
commissioned officer in the navy or coast guard who ranks above a  
rear admiral and whose insignia is three stars

*vice-chan-cel-lor* /vis-ˈchan(t)-s(ə)-lɔr, -vis-/ n [ME *vichancellor*, fr.  
MF *vichancelier*, fr. *vis- + chancelier* chancellor] (15c) 1: an officer  
ranking next below a chancellor and serving as deputy to the chan-  
cellor 2: chief administrative officer in a British university 3: a judge  
appointed to act for or to assist a chancellor

*vice-con-sul* /vī-kən(t)-səl/ n (1559): a consular officer subordinate to a  
consul general or to a consul

*vice-ger-en-cy* /vī-jir-ən(t)-sē/ n, pl *-cies* (1596): the office or jurisdic-  
tion of a vicegerent

*vice-ger-ent* /vī-jir-ənt/ n [ML *vicegerent-*, *vicegerens*, fr. LL *vice-* + L  
*gerent-*, *gerens*, prp. of *gerere* to carry, carry on] (1536): an adminis-  
trative deputy of a king or magistrate

*vi-cen-ni-al* /vī-se-nē-əl/ adj [LL *vicennium* period of 20 years, fr. L *vi-*  
*ces* 20 times + *annus* year; akin to L *viginti* twenty — more at VIGESI-  
MAL, ANNUAL] (ca. 1859): occurring once every 20 years

*vice presidency* n (1804): the office of vice president

*vice president* n (1574) 1: an officer next in rank to a president and  
usu. empowered to serve as president in that officer's absence or dis-  
ability 2: any of several officers serving as a president's deputies in  
charge of particular locations or functions — *vice presidential* adj

*vice-re-gal* /vis-ˈrē-gəl, -vis-/ adj (1836): of or relating to a viceroy or  
vicerealty — *vice-re-gal-ly* /-gə-lē/ adv

*vice-re-gent* /vī-rē-jənt/ n (1556): a regent's deputy

*vice-reine* /vis-ˈrēn, -rēn/ n [F, fr. *vice-* + *reine* queen, fr. L *regina*, fem. of  
*reg-*, rex king — more at ROYAL] (1823) 1: the wife of a viceroy 2: a  
woman who is a viceroy

*vice-roy* /vis-ˈrɔi/ n [MF *vice-roi*, fr. *vice-* + *roi* king, fr. L *reg-*, rex]  
(1524) 1: the governor of a country or province who rules as the rep-  
resentative of a king or sovereign 2: a showy American nymphalid  
butterfly (*Limenitis archippus*) closely mimicking the monarch in col-  
oration but smaller

*vice-roy-al-ty* /vis-ˈrɔi-(ə)-tē, -vis-/ n (1703): the office, jurisdiction,  
or term of service of a viceroy

*vice-roy-ship* /vis-ˈrɔi-ˈʃɪp/ n (1609): VICEROYALTY

*vice squad* n (1905): a police squad charged with enforcement of laws  
concerning gambling, pornography, prostitution, and the illegal use of  
liquor and narcotics

*vice-ver-sa* /vī-si-vər-sə, vīs-vər-/ adv [L] (1601): with the order  
changed: with the relations reversed: CONVERSELY

*vi-chys-soise* /vī-shē-ˈswāz, vē-/ n [F, fr. fem. of *vichyssois* of Vichy, fr.  
*Vichy*, France] (1939): a soup made of pureed leeks or onions and po-  
tatoes, cream, and chicken stock and usu. served cold

la\ about /ə/ kitten, F table /ər/ further /ə/ ash /ə/ ace /ə/ mop, mar

la\ out /ə/ chin /ə/ bet /ə/ easy /ə/ go /ə/ hit /ə/ ice /ə/ job

la\ sing /ə/ go /ə/ law /ə/ boy /ə/ thin /ə/ the /ə/ loot /ə/ foot

la\ yet /ə/ vision /ə/ k, 0, æ, ɔ, u, ɛ, ɪ, ʌ see Guide to Pronunciation

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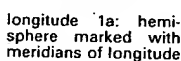
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**long-haired** \-'hard, -'herd/ or **longhair** *adj*  
 and \ *n* (1666) : **HANDWRITING**: **a** : characters or words  
 y by hand **b** : cursive writing

ʏ\ yet \zh\ vision lā, k, <sup>n</sup>, œ, œ̃, ʉ, ʉ̃, ʏ see Guide to Pronunciation



**u·di·nal·ly** *adv*  
(and wave) in which the

of the line of advance  
ear

which a jump for dis-  
**jumper  $n$**   
 (*Pinus palustris*) of the  
 of three and four

...three and long cones  
...se-grained reddish or-  
...PINE

with a longline; *also* : a

ingline  
iving a long life : char-

long time : ENDURING  
meter in which the sec-  
lines rhyme — called

ards also **Lon-go-bar-**  
pl., fr. *L. Langobardi*,  
edic \lôn-gô-lhâr-dik

to be played at 33 1/3

fit for long distances  
at a long period of time

ne — usu. used in the

**longshore**, short for  
loads ships at a seaport  
5): the act or occupa-

involving great risk but  
venture unlikely to suc-  
cess chance of winning 3

ED — long-sight-ed-

g since forgotten) 2  
riend).

g-clawed finches (esp.  
Great Plains of N.

Great Plains of No.  
ration  
g and patient endur-

**suffer·ing·ly** \-lē\ *adv*

the \ū\ loot \ù\ foot

## de to Pronunciation

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Court's prior decisions "have left open the possibility that legislation *might be* 'unconstitutional if it imposes...'" 524 U.S. at 528-29, 118 S.Ct. 2131 (emphases added).

4. The Kitts make other arguments. Some of them have been adequately dealt with in our prior opinion. The remainder do not require discussion.

### CONCLUSION

The petition for rehearing is granted to the extent that the analysis and conclusions in this opinion are inconsistent with our prior opinion, which is modified accordingly. The principal changes would be made in the language at 277 F.3d at 1333 beginning at line 4 of the first column through the first full paragraph in that column. In all other respects, rehearing is denied.



CCS FITNESS, INC., Plaintiff-Appellant,

v.

BRUNSWICK CORPORATION and its Division Life Fitness, Defendants Appellees.

No. 01-1139.

United States Court of Appeals,  
Federal Circuit.

May 3, 2002.

Rehearing Denied May 30, 2002.

In a patent infringement suit, the United States District Court for the District of Colorado, Lewis T. Babcock, Chief Judge, granted summary judgment of non-infringement, and patentee appealed. The Court of Appeals for the Federal Circuit, Michel, Circuit Judge, held that: (1) claim term "reciprocating member," as used in patents for an elliptical trainer stationary exercise device, encompassed a multi-com-

ponent, curved structure used by the accused exercise machines; (2) alleged infringer could not rebut the presumption that "reciprocating member" was not restricted as a means-plus-function clause and thus covered more than the single-component, straight-bar structures, and their equivalents, shown in the patents' drawings; and (3) patentee did not waive a claim construction argument on appeal.

Reversed in part, vacated in part, and remanded.

### 1. Patents $\S$ 159, 165(1), 167(1), 168(2.1)

Patent claim interpretation begins with an examination of the intrinsic evidence, i.e., the claims, the rest of the specification and, if in evidence, the prosecution history, and courts may also use extrinsic evidence, e.g., expert testimony and treatises, to resolve the scope and meaning of a claim term.

### 2. Patents $\S$ 157(1)

Generally, court indulges a heavy presumption that a claim term carries its ordinary and customary meaning.

### 3. Patents $\S$ 101(9)

If an apparatus claim recites a general structure without limiting that structure to a specific subset of structures, court will generally construe the term to cover all known types of that structure that the patent disclosure supports.

### 4. Patents $\S$ 159

Dictionary definitions may establish a claim term's ordinary meaning, so long as the definition does not fly in the face of the patent disclosure.

### 5. Patents $\S$ 167(1.1)

An accused infringer may overcome the heavy presumption that a claim term carries its ordinary and customary meaning, and narrow a claim term's ordinary meaning, but he cannot do so simply by

pointing to the preferred embodiment or other structures or steps disclosed in the specification or prosecution history.

**6. Patents ⇨167(1.1)**

A patentee need not describe in the specification every conceivable and possible future embodiment of his invention.

**7. Patents ⇨162**

A claim term will not receive its ordinary meaning if the patentee acted as his own lexicographer and clearly set forth a definition of the disputed claim term in either the specification or prosecution history.

**8. Patents ⇨162, 168(2.1)**

A claim term will not carry its ordinary meaning if the intrinsic evidence shows that the patentee distinguished that term from prior art on the basis of a particular embodiment, expressly disclaimed subject matter, or described a particular embodiment as important to the invention.

**9. Patents ⇨157(1)**

A claim term also will not have its ordinary meaning if the term chosen by the patentee so deprives the claim of clarity as to require resort to the other intrinsic evidence for a definite meaning.

**10. Patents ⇨101(8, 10)**

A claim term will cover nothing more than the corresponding structure or step disclosed in the specification, as well as equivalents thereto, if the patentee phrased the claim in step- or means-plus-function format. 35 U.S.C.A. § 112.

**11. Patents ⇨101(3)**

The claim term "reciprocating member," as used in patents for an elliptical trainer stationary exercise device, encompassed a multi-component, curved structure used by the accused exercise machines, and "member" denoted a beam-like structure that is a single unit in a larger whole, and was not limited to a straight-

bar structure comprising a single component only, as depicted in the patents' drawings, as the specification never required a certain number of components or certain shape, nor did it limit the "member" in either regard, the prosecution history did not contain any clear statements that would narrow the ordinary meaning of the claimed "member," and nothing in the specifications distinguished the claimed "member" from prior art based on its shape or number of components.

**12. Patents ⇨167(1.3)**

Within patents for an elliptical trainer stationary exercise device, the specifications did not need to include a drawing of a multi-component, curved member for the claimed invention to cover that particular embodiment, where the drawings merely illustrated a particular embodiment of the claimed member and the specifications did not clearly assign a unique definition to "member," distinguish "member" based on the prior art, disclaim subject matter or describe a single-component, straight-bar "member," which was depicted in the patents' drawings, as important to the invention.

**13. Patents ⇨159**

Where court could resolve the ordinary meaning of a claim term by resort to the intrinsic evidence and dictionary definitions only, it did not need to examine expert testimony.

**14. Patents ⇨159**

Expert testimony was not particularly helpful in establishing that a claim term lacked clear meaning, since the inventor himself, presumably also an artisan of ordinary skill in the art, offered testimony that essentially contradicted the expert's assertion that term lacked an ordinary meaning.

**15. Patents ⇨101(8)**

A claim using a means-plus-function format will cover only the corresponding

step or structure disclosed in the written description, as well as that step or structure's equivalents. 35 U.S.C.A. § 112.

**16. Patents ⇌101(8)**

A claim limitation that actually uses the word "means" will invoke a rebuttable presumption of applicability of statute under which a claim using a means-plus-function format will cover only the corresponding step or structure disclosed in the written description, as well as that step or structure's equivalents, while a claim term that does not use "means" will trigger the rebuttable presumption that the statute does not apply. 35 U.S.C.A. § 112.

**17. Patents ⇌101(8)**

When a claim does not the word "means," presumption of non-applicability of statute under which a claim using the means-plus-function format will cover only the corresponding step or structure disclosed in the written description, as well as that step or structure's equivalents, can be rebutted if a party demonstrates that the claim term fails to recite sufficiently definite structure or else recites a function without reciting sufficient structure for performing that function, and to help determine whether a claim term recites sufficient structure, court examines whether it has an understood meaning in the art. 35 U.S.C.A. § 112.

**18. Patents ⇌101(8)**

Alleged infringer of patents for an elliptical trainer stationary exercise device could not rebut the presumption that "reciprocating member" was not restricted as a means-plus-function clause and thus covered more than the single-component, straight-bar structures, and their equivalents, shown in the patents' drawings, where alleged infringer offered nearly no analysis in this regard, and where the dictionary definitions of "member" showed

that an artisan of ordinary skill would understand this term to have an ordinary meaning and to connote beam-like structures. 35 U.S.C.A. § 112.

**19. Patents ⇌101(8)**

A claim term need not connote a precise physical structure in order to avoid the ambit of the statutory provision under which a claim using the means-plus-function format will cover only the corresponding step or structure disclosed in the written description, as well as that step or structure's equivalents. 35 U.S.C.A. § 112.

**20. Patents ⇌165(4)**

In the course of construing disputed claim terms, a court should not ordinarily rely on the preferred embodiments alone as representing the entire scope of the claimed invention.

**21. Patents ⇌226.7**

District court could not properly use illustrations and a video of the patented invention's commercial embodiment to compare allegedly infringing device with the function-way-result of some claim limitation not identified in its opinion.

**22. Patents ⇌324.1**

Patentee did not waive a claim construction argument on appeal on theory it did not present the argument to the district court, where patentee appeared to have argued from the start that claim term ought to carry its ordinary meaning and that the scope of this ordinary meaning encompassed the structure used by the accused device, and the district court itself indicated that the patentee focused on this same argument during summary judgment, though patentee, on appeal, may have elaborated upon the argument it initially made to the district court.

**23. Patents ⇌324.1**

In the context of claim construction, a waiver of a claim construction argument

may occur if a party raises a new issue on appeal, as by presenting a new question of claim scope, but a waiver will not necessarily occur if a party simply presents new or additional arguments in support of the scope of its claim construction on appeal, and, in addition, Court of Appeals for the Federal Circuit looks to see whether the trial court and the party claiming waiver had fair notice and an opportunity to address the issue concerning the scope of a claim limitation.

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Paul T. Meiklejohn, Dorsey & Whitney LLP, of Seattle, WA, argued for plaintiff-appellant. With him on the brief was David M. Jacobson.

Linda F. Callison, Colley Godward LLP, of Palo Alto, CA, argued for defendant-appellee. With her on the brief was Ricardo Rodriguez. Of counsel on the brief was Bruce A. Featherstone, Featherstone DeSisto LLP, of Denver, CO.

Before MAYER, Chief Judge, MICHEL and LOURIE, Circuit Judges.

MICHEL, Circuit Judge.

Plaintiff-Appellant CCS Fitness, Inc. appeals from a decision by the United States District Court for the District of Colorado holding that the claim limitation "reciprocating member" as used in the asserted patents does not cover anything more than the single-component straight bar depicted in the patents' drawings. As a result, the district court concluded, the accused infringer Life Fitness warranted summary judgment of non-infringement, since its accused exercise machines' "pedal lever" uses a multi-component, curved bar.

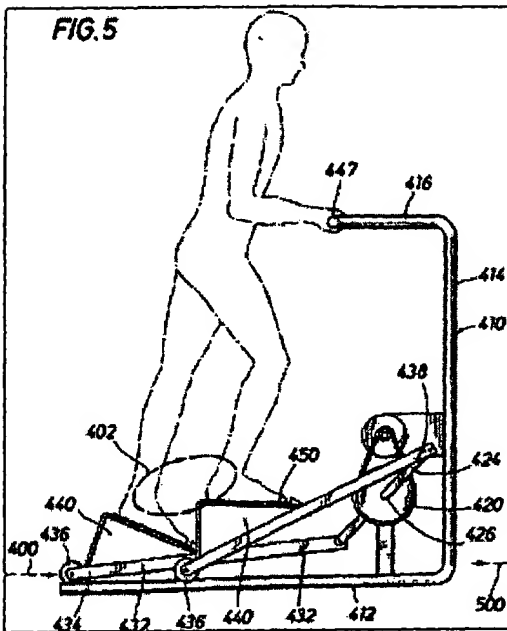
Because the claim term "member" has an established meaning and because noth-

ing in the intrinsic evidence narrows that claim term's ordinary meaning, we hold that "member" does encompass a multi-component, curved beam or lever. Thus, we reverse. To the extent that the district court's analysis of the doctrine of equivalents relied on the construction of a claim term other than "reciprocating member," we vacate that portion of the decision and remand. To the extent it relied on that term, we reverse.

## I

This case involves a stationary exercise device more commonly known as an elliptical trainer. As shown by the preferred embodiment pictured in CCS Fitness' patents, elliptical trainers comprise a vertical frame attached to a base structure at a right angle, with the base structure resting on the floor. A user approaches this machine from the rear, where he mounts two footpads, each of which lies at the end of a "foot member," a structure that extends and attaches to the vertical frame.

The foot members also intersect with "reciprocating members" (432, below), longitudinal structures that run "substantially parallel" to the floor, with one end of that structure attached to a shaft and crank system located at the vertical-frame end of the machine. The other end of a "member" has "rollers" or wheels attached to it so that the members can "reciprocate" or move back and forth on the floor as the user pushes up and down (or "climbs") on the machine's footpads. As the user does so, the front end of the member rotates around the crankshaft, thereby causing the reciprocating member to rotate in a circular motion before gradually changing into a linear motion. The elliptical trainer generally allows a user to engage in high-intensity cardiovascular exercise without putting undue stress on the user's knees.



CCS Fitness owns by assignment the three combination patents that claim this stationary exercise device: U.S. Patent Nos. 5,924,962 ('962 patent); 5,938,567 ('567 patent); and 5,683,333 ('333 patent). Claims 9 and 10 from the '962 patent and claims 1 and 2 of the '567 patent are representative:

9. An apparatus for exercising comprising: a frame having a base portion adapted to be supported by a floor; first and second *reciprocating members*, each reciprocating member having a first and a second end, a portion of said first and second reciprocating members being adapted for substantially linear motion;....

10. The exercising device according to claim 9 wherein said coupler member attaching means comprises: a first element attached at one end to said pulley proximate said pivot axis and at its other end to said second end of said first *reciprocating member*; and a second element attached at one end to said pulley proximate said pivot access and at its

other end to said second end of said  
second reciprocating member. . . .

1. An apparatus for exercising comprising: a frame having a base portion adapted to be supported by a floor; first and second *reciprocating members*, each reciprocating member having a rear support and a front end; . . .

2. The exercise apparatus according to claim 1 wherein said rear support comprises a roller attached to each *reciprocating member* and adapted to rollably [sic] engage the base portion of said frame.

U.S. Patent No. 5,924,962, col. 8, lines 17–24, 42–49; U.S. Patent No. 5,938,567, col. 6, lines 56–62, col. 7, lines 29–32 (emphases added). Besides the description set forth above, nothing in the claim language of the three patents describes the shape of the reciprocating members or whether it consists of a single-component structure only, as opposed to a structure consisting of multiple components.



In addition, nothing in the respective patents' abstract, summary of invention or detailed description sets forth the shape or makeup of these structures. The drawings for the patents' preferred embodiments depict the reciprocating members as a single-component, straight-bar structure. The prosecution history, meanwhile, discusses only the "angle" taken by a "foot platform relative to a reciprocating member" and the members' wheels and attachment to the crankshaft.

In April 1998, CCS Fitness sued Brunswick Corporation and its division Life Fitness (collectively referred to as "Life Fitness"), alleging that two of Life Fitness' elliptical exercisers literally infringed claims 9, 10 and 12 of the '962 patent, claims 1—5 of the '567 patent and further infringed, under the doctrine of equivalents, claims 1—6 of the '333 patent. The parties do not dispute that, in lieu of "reciprocating members," Life Fitness' accused machines use "pedal levers," structures that curve upward as they approach the frame end of the machine. The "pedal levers" also use multiple components to attach to and rotate around a crankshaft, not a single component.

Both parties moved for summary judgment, with CCS Fitness arguing that the reciprocating members contained in each of the claims at issue comprised more than simply a single-component, straight bar—they also included the curved, multi-component structure used in the accused devices. The parties agreed that "reciprocating" referred to the "back and forth" movement of the "member"; but the district court disagreed with CCS Fitness' proposed construction of "member," reasoning that the claim language never alluded to the reciprocating members as having multiple parts. Further, said the district court, the "illustrations in the three patents-in-suit show a reciprocating member

... made of one contiguous piece of hard material, with no connections or joints."

As to the shape of the reciprocating members, the court noted that nothing in the claims, specifications or prosecution history indicates what shape these structures had to take; but again, it reasoned that the "figures [of the claimed invention] illustrate a straight bar." Citing *Bocciarelli v. Huffman*, 43 C.C.P.A. 873, 232 F.2d 647, 652 (1956), the district court maintained that if CCS Fitness wanted to claim a device whose reciprocating member included a curved, multi-component structure, its patents should have included an illustration that showed these embodiments. To shore up this analysis, the district court then substituted the language "single straight bars that move back and forth" in lieu of the claims' use of "reciprocating members," concluding that its interpretation was "logical" when read in that light. Accordingly, because the accused devices used a curved reciprocating member that consisted of multiple components, the district court concluded that it did not literally infringe CCS Fitness' '962 or '567 patents as a matter of law, thereby entitling Life Fitness to summary judgment.

The district court also granted summary judgment for Life Fitness on CCS Fitness' claim that the accused exercise machines infringed the '333 patent under the doctrine of equivalents. In a brief analysis, the district court did not identify or construe the claim language at issue in this patent. Instead, it noted that the "Patent illustrations and CCS video" showed that the "CCS machine" caused its reciprocating members to rotate around the crankshaft in a "perfect circle." By contrast, reasoned the court, the "circle" created by the accused machines used "multiple links" to generate that result, leading the court to conclude that CCS Fitness could not

establish that its invention and the accused devices relied on the “same way to create substantially the same result.”

CCS Fitness appeals, arguing again that the ordinary meaning of the term “reciprocating member”—whether defined by an ordinary or a technical dictionary—covers a curved structure consisting of one or more components. In support of this argument, CCS Fitness directs our attention to what it calls the “Alternative A” and “Alternative B” set of components used by the accused devices. Life Fitness counters that (among other things) the specification and the drawings can limit the scope of the claimed reciprocating members, since “member” is a vague term whose scope requires clarification from the specification and drawings. To support this argument, Life Fitness points to an affidavit from an expert who avers that “member” has no customary meaning to one of ordinary skill, thereby necessitating resort to the specification. The record, however, also contains an affidavit from the inventor who asserts that “member” has a broad, ordinary meaning in the relevant art.

Alternatively, Life Fitness suggests that the claimed “member” is so lacking in structure that it essentially constitutes a means-plus-function clause, *see* 35 U.S.C. § 112 ¶ 6, meaning it would cover nothing more than the corresponding structure (and its equivalents) disclosed in the specification and drawings. So too does it suggest that statements in the prosecution history limit the scope of the claimed “member” so that it could not encompass the accused device’s “pedal levers.” Last, Life Fitness contends that CCS Fitness is presenting a different claim construction theory on appeal than it did to the district court, as it never pressed the “Alternative A and B” part of its argument on the district court. Consequently, Life Fitness urges us to hold that CCS Fitness has

waived its current claim construction argument.

## II

We have jurisdiction under 28 U.S.C. § 1295(a)(1) (1994) and review the district court’s summary judgment ruling *de novo*. *Pall Corp. v. PTI Tech. Inc.*, 259 F.3d 1383, 1389, 59 USPQ2d 1763, 1767 (Fed. Cir.2001). In so doing, we draw all reasonable factual inferences in favor of the nonmoving party. *Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 175 F.3d 985, 988, 50 USPQ2d 1607, 1609 (Fed.Cir.1999).

## A

Patent infringement requires a two-step analysis. *Id.* First, a court must determine as a matter of law the correct scope and meaning of a disputed claim term. *Id.* We review this aspect of the infringement analysis *de novo*. *Burke, Inc. v. Bruno Indep. Living Aids, Inc.*, 183 F.3d 1334, 1338, 51 USPQ2d 1295, 1298 (Fed.Cir. 1999). Second, the analysis requires a comparison of the properly construed claims to the accused device, to see whether that device contains all the limitations, either literally or by equivalents, in the claimed invention. *Johnson Worldwide*, 175 F.3d at 988, 50 USPQ2d at 1609; *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1247–48, 48 USPQ2d 1117, 1120 (Fed.Cir.1998). As in this case, the litigants frequently do not dispute the structure of the accused device, meaning the infringement analysis often turns on the interpretation of the claims alone. *Netword, LLC v. Centraal Corp.*, 242 F.3d 1347, 1350, 58 USPQ2d 1076, 1078 (Fed.Cir.2001); *Wang Labs., Inc. v. America Online Inc.*, 197 F.3d 1377, 1381, 53 USPQ2d 1161, 1163 (Fed. Cir.1999).

[1] Claim interpretation begins with an examination of the intrinsic evidence, *i.e.*, the claims, the rest of the specification and, if in evidence, the prosecution history. *Gart v. Logitech, Inc.*, 254 F.3d 1334, 1339–40, 59 USPQ2d 1290, 1293–94 (Fed. Cir.2001); *O.I. Corp. v. Tekmar Co. Inc.*, 115 F.3d 1576, 1581, 42 USPQ2d 1777, 1780 (Fed.Cir.1997). Courts may also use extrinsic evidence (*e.g.*, expert testimony, treatises) to resolve the scope and meaning of a claim term. *Spectrum Int'l, Inc. v. Sterilite Corp.*, 164 F.3d 1372, 1378, 49 USPQ2d 1065, 1068 (Fed.Cir.1998); *Kegel Co., Inc. v. AMF Bowling, Inc.*, 127 F.3d 1420, 1426, 44 USPQ2d 1123, 1127 (Fed. Cir.1997).

[2–4] Generally speaking, we indulge a “heavy presumption” that a claim term carries its ordinary and customary meaning. *Johnson Worldwide*, 175 F.3d at 989, 50 USPQ2d at 1610; *accord Gart*, 254 F.3d at 1341, 59 USPQ2d at 1295; *Kegel*, 127 F.3d at 1427, 44 USPQ2d at 1127. “[I]f an apparatus claim recites a general structure without limiting that structure to a specific subset of structures, we will generally construe the term to cover all known types of that structure” that the patent disclosure supports. *Renishaw*, 158 F.3d at 1250, 48 USPQ2d at 1122. Sensibly enough, our precedents show that dictionary definitions may establish a claim term’s ordinary meaning. *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1344, 60 USPQ2d 1851, 1855 (Fed.Cir.2001) (using Random House Unabridged Dictionary to define the ordinary meaning of “portion” as encompassing both a one-piece and a two-piece structure); *Renishaw*, 158 F.3d at 1250, 48 USPQ2d at 1122 (noting that the meaning of a claim term may come from a “relevant dictionary” so long as the definition does not fly “in the face of the patent disclosure”); *Kegel*, 127 F.3d at 1427, 44 USPQ2d at 1127 (using Webster’s *Third New International Dictionary* to define the claim term “assembly”); *Vitronics*

*Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1584 n. 6, 39 USPQ2d 1573, 1580 n. 6 (Fed.Cir.1996) (“Although technical treatises and dictionaries fall within the category of extrinsic evidence, as they do not form a part of an integrated patent document, they are worthy of special note. Judges are free to consult such resources at any time in order to better understand the underlying technology and may also rely on dictionary definitions when construing claim terms, so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent documents.”).

[5, 6] An accused infringer may overcome this “heavy presumption” and narrow a claim term’s ordinary meaning, but he cannot do so simply by pointing to the preferred embodiment or other structures or steps disclosed in the specification or prosecution history. *Johnson Worldwide*, 175 F.3d at 989–90, 992, 50 USPQ2d at 1610; *Burke*, 183 F.3d at 1340, 51 USPQ2d at 1299. Indeed, contrary to the district court’s analysis here, our case law makes clear that a patentee need not “describe in the specification every conceivable and possible future embodiment of his invention.” *Rexnord*, 274 F.3d at 1344, 60 USPQ2d at 1856 (citations omitted).

[7, 8] Rather, as shown by our precedents, a court may constrict the ordinary meaning of a claim term in at least one of four ways. First, the claim term will not receive its ordinary meaning if the patentee acted as his own lexicographer and clearly set forth a definition of the disputed claim term in either the specification or prosecution history. *E.g.*, *Johnson Worldwide*, 175 F.3d at 990, 50 USPQ2d at 1610; *Rexnord*, 274 F.3d at 1342, 60 USPQ2d at 1854. Second, a claim term will not carry its ordinary meaning if the intrinsic evidence shows that the patentee distinguished that term from prior art on the

basis of a particular embodiment, expressly disclaimed subject matter, or described a particular embodiment as important to the invention. *E.g.*, *Spectrum Int'l*, 164 F.3d at 1378, 49 USPQ2d at 1068-69 (narrowing a claim term's ordinary meaning based on statements in intrinsic evidence that distinguished claimed invention from prior art); *SciMed Life Sys., Inc. v. Adv. Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1343-44, 58 USPQ2d 1059, 1064 (Fed.Cir. 2001) (limiting claim term based in part on statements in the specification indicating that "all embodiments" of the claimed invention used a particular structure); *Toro Co. v. White Consol. Indus., Inc.*, 199 F.3d 1295, 1301, 53 USPQ2d 1065, 1069 (Fed. Cir.1999) (limiting claim term based in part on statements in the specification describing a particular structure as "important to the invention").

[9, 10] Third, and most relevant to this case, a claim term also will not have its ordinary meaning if the term "chosen by the patentee so deprive[s] the claim of clarity" as to require resort to the other intrinsic evidence for a definite meaning. *E.g.*, *Johnson Worldwide*, 175 F.3d at 990, 50 USPQ2d at 1610; *Gart*, 254 F.3d at 1341, 59 USPQ2d at 1295. Last, as a matter of statutory authority, a claim term will cover nothing more than the corresponding structure or step disclosed in the specification, as well as equivalents thereto, if the patentee phrased the claim in step- or means-plus-function format. 35 U.S.C. § 112 ¶ 6; *Watts v. XL Sys., Inc.*, 232 F.3d 877, 880-81, 56 USPQ2d 1836, 1838 (Fed.Cir.2000) (construing § 112 ¶ 6).

## 1

[11] Applying these principles, we hold that the claim term "reciprocating member," as used in the asserted patents, encompasses the multi-component, curved structure used by the accused exercise machines. The parties agreed before the dis-

trict court that "reciprocating" simply means to move back and forth, and we accept that definition on appeal. More important, "member," as defined by common and technical dictionaries, refers to a "structural unit such as a . . . beam or tie, or a combination of these," *see* McGraw-Hill Dictionary of Scientific and Technical Terms 1237 (5th ed.1994), or to a "distinct part of a whole," *see* American Heritage Dictionary 849 (3d ed.1996). Based on these definitions, we agree with CCS Fitness that the term "member" denotes a beam-like structure that is "a single unit in a larger whole." It is not limited to a straight-bar structure comprising a single component only.

[12] In addition, Life Fitness has not shown that anything in the specification or prosecution history overcomes the "heavy presumption" that "member" carries its ordinary meaning. The specification never requires a certain number of components or certain shape; nor does it limit the "member" in either regard. Contrary to the district court's analysis, moreover, the specifications did not need to include a drawing of a multi-component, curved member for the claimed invention to cover that particular embodiment. The drawings merely illustrated a particular embodiment of the claimed member and the specifications did not clearly assign a unique definition to "member," distinguish "member" based on the prior art, disclaim subject matter or describe a single-component, straight-bar "member" as important to the invention.

Nor does the prosecution history contain any clear statements that would narrow the ordinary meaning of the claimed "member." Indeed, Life Fitness itself characterizes the statements in the prosecution history as posing a mere "inconsistency" with the ordinary meaning of "member," not as assertions that, *e.g.*,

clearly disclaimed subject matter. In any event, having reviewed the statements identified by Life Fitness, we see nothing that bears on the shape or the number of components comprised by the term “member.” We see only a terse mention of the “angle” that a “foot platform” takes “relative to a reciprocating member” and the members’ wheels and attachment to the crankshaft.

[13,14] Life Fitness also relies on expert testimony, but this testimony does not establish the assertion that “member” lacks clear meaning. First, we can resolve the ordinary meaning of the claimed “member” by resort to the intrinsic evidence and dictionary definitions only. Thus, we do not need to examine expert testimony. Even doing so, however, we do not view this expert testimony as particularly helpful, since the inventor himself, presumably also an artisan of ordinary skill in the art, offered testimony that essentially contradicts the expert’s assertion that “member” lacks an ordinary meaning. In other words, the battle between Life Fitness’ expert testimony and CCS Fitness’ inventor testimony is inconclusive. Unsurprisingly, the district court’s infringement analysis did not rely on the testimony of either the expert witness or the inventor in reaching its claims construction conclusions. Neither do we.

*SciMed Life Systems* does not compel a different conclusion. See 242 F.3d at 1342–44, 58 USPQ2d at 1064–65. In that case, we determined that the claim term “lumen,” as used in three patents covering a type of catheter, meant a “coaxial lumen” only. *Id.* at 1342, 242 F.3d 1337, 58 USPQ2d at 1064. The specification distinguished the claimed invention from the prior art based on that art’s use of “dual lumens” and pointed out the advantages of coaxial lumens. *Id.* at 1343, 242 F.3d 1337, 58 USPQ2d at 1064. It also described “the present invention” as using a coaxial

lumen, and it stated that “all embodiments of the present invention” use coaxial lumens. *Id.* at 1343–44, 242 F.3d 1337, 58 USPQ2d at 1064–65. We therefore determined that a catheter employing coaxial lumens was *the* invention. *Id.* at 1345, 242 F.3d 1337, 58 USPQ2d at 1066.

Here, on the other hand, nothing in the specifications distinguishes the claimed “member” from prior art based on its shape or number of components. And the specifications do not even imply that “all embodiments” of the claimed exercise machine must use a single-component, straight-bar member or else tout the advantages of using that particular structure. In short, Life Fitness cannot use the intrinsic evidence’s silence to narrow the ordinary meaning of an unambiguous claim term. See, e.g., *Johnson Worldwide*, 175 F.3d at 992, 50 USPQ2d at 1612 (“[M]ere inferences drawn from the description of an embodiment of the invention cannot serve to limit claim terms.”); *Kegel*, 127 F.3d at 1427, 44 USPQ2d at 1127 (“Without an express intent to impart a novel meaning to a claim term, the term takes on its ordinary meaning.”); see also *Wang Labs.*, 197 F.3d at 1384, 53 USPQ2d at 1165–66 (limiting term “frame” to the character-based system in the specification when (among other things) the prosecution history distinguished the claimed invention from prior art based on that system).

In *Toro Company*, also relied on by Life Fitness, we limited a claim term—“said cover including means for increasing pressure”—to the structure shown in the patent’s specifications and drawings. 199 F.3d at 1300–01, 53 USPQ2d at 1069. We did so because dictionary definitions of “cover” and “including” did not “shed dispositive light” on the scope of that claim limitation, *id.* at 1300, 199 F.3d 1295, 53 USPQ2d at 1069, and the specification described the particular structure at issue, a

ring physically attached to the cover, as “important to the invention.” *Id.* at 1301, 199 F.3d 1295, 53 USPQ2d at 1069. But this precedent does not rescue Life Fitness’ argument, for unlike the intrinsic evidence in *Toro*, nothing in the intrinsic evidence here describes a single-component, straight-bar “member” as important to the invention. *See id.*; *see also Watts*, 232 F.3d at 882–83, 56 USPQ2d at 1840–41 (limiting claim term “sealingly connected” to the “misaligned taper angles” disclosed in the specification when the claim term was “not clear on its face” and the prosecution history showed that the patentee had distinguished the claimed invention from prior art based on the “misaligned taper angles”); *Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp.*, 93 F.3d 1572, 1579, 1581, 40 USPQ2d 1019, 1024, 1026 (Fed.Cir.1996) (limiting term “pusher assembly” to the structures stated in the claims themselves and shown in the drawings when the claim term itself did not define the makeup of the “assembly” and the specification provided only “minimal guidance” about the term’s scope).

## 2

[15, 16] Life Fitness’ mild attempt to make the claimed “reciprocating member” a means-plus-function clause fares no better. A claim using that format will cover only the corresponding step or structure disclosed in the written description, as well as that step or structure’s equivalents. 35 U.S.C. § 112 ¶ 6; *Watts*, 232 F.3d at 881, 56 USPQ2d at 1838; *Personalized Media Communications, LLC v. Int’l Trade Comm’n*, 161 F.3d 696, 703, 48 USPQ2d 1880, 1886 (Fed.Cir.1998). A claim limitation that actually uses the word “means” will invoke a rebuttable presumption that § 112 ¶ 6 applies. *Personalized Media Communications*, 161 F.3d at 703–04, 48 USPQ2d at 1887. By contrast, a claim term that does not use “means” will trigger the rebuttable presumption that § 112

¶ 6 does not apply. *Id.* at 704, 161 F.3d 696, 48 USPQ2d at 1887; *Watts*, 232 F.3d at 880, 56 USPQ2d at 1838. In this case, the claims at issue do not phrase the “reciprocating member” limitation in means-plus-function language, thereby triggering the rebuttable presumption that § 112 ¶ 6 does not govern.

[17] Still, Life Fitness can rebut this presumption if it demonstrates that the claim term fails to “recite sufficiently definite structure” or else recites a “function without reciting sufficient structure for performing that function.” *Watts*, 232 F.3d at 880, 56 USPQ2d at 1838. To help determine whether a claim term recites sufficient structure, we examine whether it has an understood meaning in the art. *Id.* at 880–81, 232 F.3d 877, 56 USPQ2d at 1838.

[18] Here, we conclude that Life Fitness cannot rebut the presumption that “reciprocating member” is not restricted by § 112 ¶ 6 and thus covers more than the single-component, straight-bar structures (and their equivalents) shown in the patents’ drawings. For one thing, Life Fitness itself has offered nearly no analysis in this regard, *i.e.*, has done nothing to try to overcome the presumption. Moreover, as set forth above, the dictionary definitions of “member” show that an artisan of ordinary skill would understand this term to have an ordinary meaning and to connote beam-like structures. *See Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1583, 39 USPQ2d 1783, 1786 (Fed.Cir.1996) (“‘Detent’ . . . is just such a term. Dictionary definitions make clear that the noun ‘detent’ denotes a type of device with a generally understood meaning in the mechanical arts, even though the definitions are expressed in functional terms.”); *Cole v. Kimberly-Clark Corp.*, 102 F.3d 524, 531, 41 USPQ2d 1001, 1006 (Fed.Cir.1996) (using dictionary definition

of “perforation” to discern whether one of ordinary skill would understand this term to connote structure).

[19] Further, in addition to the structure suggested by these dictionary definitions (e.g., a “structural unit such as a . . . beam or tie, or a combination of these”), the claims themselves describe the “member” as having a “rear support and a front end” with one end of this structure circulating around a crankshaft and the other having wheels so that it can “rollably engage the base portion” of the claimed invention. This suffices for purposes of § 112 ¶6 and the presumption thereto, since a term need not connote a precise physical structure in order to avoid the ambit of that provision. E.g., *Personalized Media Communications*, 161 F.3d at 705, 48 USPQ2d at 1888.

### 3

Because the claim term “reciprocating member” encompasses a multi-component, curved structure, and because the parties do not dispute the structure of the accused device, we must reverse the district court’s summary judgment determinations of no literal infringement and no infringement by equivalents.

We note that, as to the doctrine-of-equivalents analysis, the district court also appeared to rely on its construction of “reciprocating member.” On the other hand, the court did discuss the “perfect circle” created by the claimed exercise machine, as opposed to the “elliptical” motion created by the accused device. In so doing, the court did not identify any claim language that related to this “perfect circle”; instead, it cited only the commercial embodiments shown in a video and illustrations of the claimed exercise machine.

[20, 21] Accordingly, to the extent the district court’s analysis relied on any claim limitation other than “reciprocating member,” we vacate. In the course of

construing the disputed claim terms, a court should not ordinarily rely on the preferred embodiments alone as representing the entire scope of the claimed invention. See *SRI Int’l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1121, 227 USPQ 577, 586 (Fed.Cir.1985) (*en banc*) (“Infringement, literal or by equivalence, is determined by comparing an accused product not with a preferred embodiment described in the specification, or with a commercialized embodiment of the patentee, but with the properly and previously construed claims in suit.”); see also *Rexnord*, 274 F.3d at 1344, 60 USPQ2d at 1856 (emphasizing that the scope of a claim term often covers more than the embodiments disclosed in the specification and that a patent applicant need not describe “in the specification every conceivable and possible future embodiment of his invention”). And so, if the district court here used illustrations and a video of the patented invention’s commercial embodiment to compare the function-way-result of some claim limitation not identified in its opinion, we vacate that portion of the judgment instead of reversing it altogether. On remand, the district court may simply clarify that it was in fact relying solely on its construction of “reciprocating member” to conduct the doctrine-of-equivalents analysis. In either event, however, a remand is necessary.

### B

[22, 23] Finally, Life Fitness contends that CCS Fitness waived its claim construction argument on appeal because CCS Fitness never presented the “Alternative A and B” arguments to the district court. We disagree. Our precedent makes clear that in the context of claim construction, a waiver may occur if a party raises a new issue on appeal, as by, e.g., presenting a new question of claim scope. *Interactive Gift Express, Inc. v. Compuserve Inc.*, 256

F.3d 1323, 1347, 59 USPQ2d 1401, 1419 (Fed.Cir.2001). A waiver will not necessarily occur, however, if a party simply presented new or additional arguments in support of “the scope of its claim construction, on appeal.” *Id.* In addition, we look to see whether the trial court and the party claiming waiver had fair notice and an opportunity to address the issue concerning the scope of a claim limitation. See *Finnigan Corp. v. Int’l Trade Comm’n*, 180 F.3d 1354, 1362–63, 51 USPQ2d 1001, 1007 (Fed.Cir.1999) (discussing “waiver” in the context of presenting claim construction arguments to an administrative law judge).

In this case, CCS Fitness appears to have argued from the start that its “reciprocating member” ought to carry its ordinary meaning and that the scope of this ordinary meaning encompasses the multi-component, curved structure used by the accused exercise machines. See *Interactive Gift Express*, 256 F.3d at 1347, 59 USPQ2d at 1419. Indeed, the district court itself indicated that CCS Fitness focused on this same argument during summary judgment, which further shows that neither Life Fitness nor the district court lacked notice or an opportunity to address the arguments now presented on appeal. See *Finnigan Corp.*, 180 F.3d at 1362–63, 51 USPQ2d at 1007. That CCS Fitness may have elaborated upon the argument it initially made to the district court (*e.g.*, by adding a discussion about “Alternatives A and B”) does not undermine this conclusion. See *Interactive Gift Express*, 256 F.3d at 1347, 59 USPQ2d at 1419; *cf.* *Senmed, Inc. v. Richard-Allan Med. Indus., Inc.*, 888 F.2d 815, 818, 12 USPQ2d 1508, 1511 (Fed.Cir.1989) (“That an appellant’s arguments had been ineptly presented to a trial court does not in itself preclude a reversal by this court if the record unequivocally establishes that the appealed judgment resulted from clear and revers-

ible legal error.”). We conclude that no waiver of this issue occurred.

### III

We reverse the district court’s determination on summary judgment of no literal infringement, since that judgment rested on an incorrect construction of the claim term “reciprocating member.” We remand for additional proceedings consistent with this opinion. On remand, the parties and the court may address the other disputed claim terms and whether they cover the structures used by the accused exercise machines. To the extent that the district court’s analysis of the doctrine of equivalents rested on the construction of a claim term besides “reciprocating member,” we vacate that portion of the judgment. To the extent it also rested on a construction of the claim term “reciprocating member,” we reverse.

*REVERSE-IN-PART, VACATE-IN-PART and REMAND.*

### COSTS

Each party shall bear its own costs.



**BRICKWOOD CONTRACTORS,  
INC., Plaintiff-Appellee,**

**v.**

**UNITED STATES, Defendant-  
Appellant.**

**No. 01-5121.**

United States Court of Appeals,  
Federal Circuit.

May 3, 2002.

Bid protestor on government contract  
whose first protest was dismissed for



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